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[Continued on next page]

(54) Title: INTEGRATED FLOATING POWER TRANSFER DEVICE WITH LOGIC LEVEL CONTROL AND METHOD 101 102 VDC+ CS+ V DC CS CH 107 .103 104 105 **V_SW1** 106 109 V_SW2

(57) Abstract: A switch control circuit (416, 402, 418, 422) and method are provided for transistor-implemented switches (405, 413, 408, 414) of an integrated floating power transfer device (400, 500). The device includes a floating bus (403, 410) driven by a power system which includes a charge pump circuit (419, 408, 414, 420). At least one switch circuit (405, 413) is coupled to the floating bus and the power system for facilitating charging of the floating bus. The switch control circuit (416, 402, 418, 422) includes a level shifting circuit (402) for adjusting a control signal to the at least one switch circuit notwithstanding floating of an input voltage signal thereto to facilitate operation of the switch circuit.

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